

# VINNAPAS® EP 656

## Polymer Dispersions

VINNAPAS® EP 656 is a specially modified vinyl acetate-ethylene (VAE) copolymer to offer excellent adhesion to a wide variety of difficult-to-bond substrates the dispersion is poly (vinyl alcohol) stabilized for good wet tack, setting speed and excellent machinability.

## Properties

- Good adhesion to various plastic surfaces
- Permanently flexible adhesive joints
- High cohesion

## Technical data

### Specification

Property	Condition	Value	Method
Solids content	-	54 - 56 %	specific method
Viscosity, dynamic	25 °C	4000 - 9000 mPa·s	specific method
pH	-	4.0 - 6.0	specific method

## General Characteristics

Property	Condition	Value	Method
Density	20 °C	approx. 1.07 g/cm <sup>3</sup>	specific method
Minimum film forming temperature	-	0 °C	specific method
Frost resistance	-	protect from freezing	-
Protective colloid / emulsifier system	-	PVOH	-
Filler and pigment compatibility	-	excellent	specific method
Appearance of the dispersion film	-	clear, glossy	Visual
Surface of the dispersion film	-	tack free	specific method
Glass transition temperature	-	approx. 5 °C	specific method
Appearance	-	milky, white	visual check
Predominant particle size	-	approx. 1 µm	specific method

These figures are only intended as a guide and should not be used in preparing specifications.

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

## Applications

- Film-to-Wood lamination
- Paper Packaging & Converting

## Application details

### Properties

VINNAPAS® EP 656 is produced without addition of plasticizer and can be used to produce adhesives that deliver bonding that remains permanently with flexibility and resistance to aging. VINNAPAS® EP 656 shows better adhesive and cohesive strength at elevated temperatures - a versatile balance that renders adhesives with very good heat resistance. And when plasticized, the heat resistance is less adversely affected than with other VINNAPAS® VAE copolymers.

### Application

The excellent flow properties and very high setting speed of VINNAPAS® EP 656 make it ideal as a co-blending dispersion for polyurethanes or other polymers in a variety of medium- to high-speed machine applications. Primary applications include synthetic leather market adhesive, between vinyl laminating and textile. VINNAPAS® EP 656 has been used successfully in synthetic leather adhesives for PVC sheet and textile, which benefits from its high cohesion strength.

## Additional information

If the product is used in applications other than those mentioned, the choice, processing and use of the product is the sole responsibility of the purchaser. All legal and other regulations must be complied with.

For questions concerning food contact status according the chapter 21 CFR (US FDA) and German BfR, please feel free to contact us.

Wacker Chemie AG Hanns-Seidel-Platz 4 D-81737 München Germany

## Packaging and storage

### Packaging

- 200 Kg Steel drum

### Storage

When the dispersion is stored in tanks, proper storage conditions must be maintained. The product has a shelf life of 9 months starting from the date of manufacture if stored in the original, unopened containers at temperatures between 5 and 30°C. Any longer periods for the maximum storage period that may be described in the Certificate of Analysis which accompanies each shipment of the product, take preference over this suggestion in which case the time period stated in the Certificate of Analysis shall be solely authoritative. Iron or galvanized-iron equipment and containers are not recommended because the dispersion is slightly acidic. Corrosion may result in discoloration of the dispersion or its blends when further processed. Therefore, the use of containers and equipment made of ceramics, rubberized or enameled materials, appropriately finished stainless steel, or plastic (e.g. rigid PVC, polyethylene or polyester resin) is recommended. As polymer dispersions may tend to superficial film formation, skins or lumps may form during storage or transportation. Filtration is therefore recommended prior to utilization of the product.

### Preservation for Transport, Storage and further Processing

The product is adequately preserved during transportation and storage if kept in the original, unopened containers. However, if it is transferred to storage tanks, the dispersion should be protected against microbial attack by adding a suitable preservative package. Measures should also be taken to ensure cleanliness of the tanks and pipes. In unstirred tanks, a layer of preservative-containing water should be sprayed onto the surface of the dispersion to prevent the formation of unwanted skin and possible attack by microorganisms. The thickness of this water layer should be < 5 mm for low viscosity dispersions and up to 10-20 mm for high viscosity products. Proper procedures - periodic tank cleaning and sanitation - must be set up in order to prevent microbial attack. Contact your biocide representative/supplier for further plant hygiene recommendations. Measures should be taken to ensure that only clean air enters the tank when the dispersion is removed. Finished products manufactured from polymer dispersions usually also require preservation. The type and scope of preservation will depend on the raw materials used and the anticipated sources of contamination. The compatibility with other components and the efficacy of the preservative should always be tested in the respective formulation. Preservative manufacturers will be able to advise you about the type and dosage of preservative required. If the product is stored for a longer period, stirring is recommended before use.

## QR Code VINNAPAS® EP 656



**For technical, quality or product safety questions, please contact:**

**Wacker Chemie AG**, Hanns-Seidel-Platz 4, 81737 Munich, Germany  
productinformation@wacker.com, www.wacker.com

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.